

**The University of Saskatchewan
Department of Computer Science
CMPT 374**

Midterm Exam

(75 marks)

Feb. 13, 2004

No outside materials are allowed.

Time is limited. Be sure to allocate your time to your best advantage.

Be sure that your answers are legible. If I can't read them then you won't get any marks for them.

You are to analyze the following case study and then answer the questions in the spaces provided in this question paper.

CS Publications

CS Publications is a company that publishes a monthly magazine. They have just finished publishing issue # 60. You have been hired to develop a database to help the editor in keeping track of the contents of past and future issues of the magazine.

The editor assigns the writing of three kinds of content {features, columns, and advertisements} to individual writers (including the editor who is also a writer) on staff. Each assignment is given an assignment # that is based on the number of the proposed issue (where it is intended to first appear) and a sequence number to differentiate between multiple assignments for a given issue. Each assignment is also given a (working) title, a kind, a deadline for completion (stated in terms of the number of the issue where it is intended to first appear) and a series of descriptive terms. The descriptive terms come from a standard set of descriptive terms and their definitions that the magazine uses to describe different pieces of content.

Writers may be working on a number of assignments at any given time. They are allowed to change the title but must ensure that the assignment fits the series of descriptive terms assigned by the editor. Writers are also expected to record the date when they complete an assignment. Changes to deadline, descriptive terms, and/or writer can be made only by the editor, who can also change the title. If the editor is not satisfied with the quality of a completed assignment, then the editor can remove the completion date from its record. Assignment #'s do not change, even if the deadline for the assignment is changed.

While most assignments will appear in only one particular issue, some assignments (especially advertisements) may appear in many different issues. Assignments will not be listed as part of an actual issue (by the editor) until the issue is published. It should be possible to find an assignment by considering

- the list of assignments included in a particular published issue
- the list of assignments that fit certain descriptive terms
- the list of assignments assigned to a particular writer
- the list of assignments not yet completed